

### **REMARKS**

Reconsideration of this application, as presently amended, is respectfully requested. Claims 1-22 are pending in this application. Claims 1, 2 and 5-21 stand rejected. Claims 3 and 4 were objected to, but were indicated allowable if rewritten or amended to overcome the objections set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims. Claim 22 has been withdrawn from consideration.

#### **Claim Objections**

Claims 2-4 were objected to for informalities. More specifically, the Office Action asserts that the language “by at least one of” in claims 2-4 should be --by *the* at least one of-- for clarity. Claims 2-4 have been amended in accordance with the Examiner’s suggestions. Withdrawal of the objection to the claims is respectfully requested.

#### **Claim Rejections – 35 U.S.C. §112, second paragraph**

Claims 5-8 and 13-21 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

With respect to claims 5-8, the Examiner asserts that the language “the viewing of broadcasting” lacks antecedent basis. Each of claims 5-8 have been amended to recite “from the a time when the viewing of broadcasting is started to the a time when [[it]] the viewing of the broadcasting is terminated.” This amendment is intended to obviate the §112(2) rejection based

on lack of antecedent basis and to clarify that the term “it” refers to “the viewing of the broadcasting.”

With respect to claims 13-20, the Examiner asserts that the language “the report” lacks antecedent basis. Claims 13-20 have been amended to change “the report” to ~~--the report~~ said receiving condition reporting means is ~~made~~ operated in excess of said predetermined time period--.

This change alleviates the rejection based on lack of antecedent basis and renders the language of claims 13-20 consistent with the language of the claims from which they depend. For example, claim 5 recites “*said receiving condition reporting means is operated* for a predetermined time period.” Accordingly, claim 13, which depends from claim 5, was amended to recite “*said receiving condition reporting means is operated in excess of* said predetermined time period.”

With respect to claim 21, the Examiner asserts that in claim 21, lines 3-4, the language “a controller for... each broadcasting wave by said detector” is not understood since the detector is for detecting the receiving condition of a broadcasting wave. Further, the Examiner asserts that the circuit recited in the last line of claim 21 (i.e., “a circuit having an error correcting function for a demodulated digital signal”) lacks connection or cooperation with any of the precedent claimed element(s).

First, the recitation “the receiving condition for each broadcasting wave by said detector” has been changed to ~~--the~~ a receiving condition for each of the broadcasting wave detected by said detector--.

Second, claim 21 has been amended to delete the language “a circuit having an error correcting function for a demodulated digital signal” because this language does not relate to other language in the claim.

In view of the above amendments, reconsideration and withdrawal of the rejection under §112, second paragraph, is respectfully requested.

### **Claims Rejections – 35 U.S.C. §102**

Claims 1-2 and 5-20 are rejected under 35 U.S.C. §102(e) as being anticipated by **Cugnini et al.** (USP 6,389,070). Claim 21 is rejected under 35 U.S.C. §102(a) as being anticipated by **Shigihara et al** (USP 5,966,186). For the reasons set forth in detail below, these rejections, to the extent they apply to the amended claims, are respectfully traversed.

### **Claims 1-2 and 5-20**

Independent claim 1 has been amended to further define the point at which the receiving condition reporting means starts reporting that the receiving condition is degraded. Specifically, claim 1 has been amended to clarify that the reporting means starts reporting that the receiving condition is degraded in response to the frequency of error correction exceeding a report starting point, the report starting point being set within a range in which, even if errors occur, all errors can be corrected. Support for this proposed amendment is provided in paragraph [0025] of the application specification.

**Cugnini et al.** disclose a signal quality indicator for a digital broadcast video signal received by a digital television receiver. The digital television receiver includes a quality signal processor 30 for generating a quality signal for application to a video signal processor 26 such that the quality signal may be displayed on a display screen 28 (see col. 4, lines 21-24).

The **Cugnini et al.** system includes a demodulator/decoder 46 having a Reed-Solomon decoder 52 that performs error correction. The Reed-Solomon decoder 52 may be monitored for determining error rate. See col. 8, lines 16-21.

Fig. 4A of **Cugnini et al.** illustrates a signal quality indicator signal graph and a signal strength graph that are displayed on the display screen 28. As shown in Fig. 4B and described in col. 6, lines 1-21, the graphic indication of signal quality includes conditions such as “NO SIGNAL” (the demodulator is unable to find a valid signal and is not able to achieve lock), “TOV” (indicating that there are still errors, but the picture is virtually flawless), “NO ERRORS” (the demodulator is able to produce a clean data stream with no errors), and “IDEAL”.

As noted above, claim 1 has been amended to further define the point at which the receiving condition reporting means starts reporting that the receiving condition is degraded.

**Cugnini et al.** illustrates a graphical indication of signal strength and signal quality (see Figs. 4A and 4B). However, **Cugnini et al.** is silent with respect to when these graphical indications of signal strength and signal quality are *started*. It appears that the quality signal is generated and displayed at all times a signal is received (see col. 4, lines 21-27). In fact, the signal quality indicator shown in Fig. 4B illustrates a continuum from NO SIGNAL to IDEAL SIGNAL (there are no errors). Therefore, it appears that the report of signal quality in Fig. 4B is

displayed at all times ranging from when errors cannot be corrected (NO SIGNAL) to when all errors can be corrected (IDEAL SIGNAL).

It is submitted that **Cugnini et al.** do not disclose “the reporting means starts reporting that the receiving condition is degraded in response to the frequency of error correction exceeding a report starting point, the report starting point being set within a range in which, even if errors occur, all errors can be corrected,” as currently recited in claim 1.

Furthermore, the Examiner asserts that the features recited in dependent claims 9-12 are disclosed in col. 7, lines 20-30 and the features recited in dependent claims 13-20 are disclosed in col. 3, line 61- col. 4, line 27. It is respectfully submitted **Cugnini et al.** do not disclose the features recited in claims 9-12 and 13-20. For example, claims 9-12 relate to the user adjusting a predetermined time during which the receiving condition reporting means is operated. **Cugnini et al.** is silent with respect to a user adjusting the time during which the graphical displays shown in Figs. 4A and 4B are displayed.

For the reasons set forth above, it is respectfully submitted that each of claims 1-2 and 5-20 patentably distinguish over the cited prior art and define allowable subject matter.

### **Claim 21**

With respect to the rejection of claim 21, **Shigihara et al.** discloses a digital broadcast receiving device including an error detecting/correcting device 9 that calculates an error rate (error occurrence frequency) from the error amount for the amount of input information. A controller 15 converts the error rate into a C/N (carrier to noise ratio) as a received signal quality

and displays the received signal quality on the display of a TV receiver 5 or other indicator 18 (see Abstract and col. 2, lines 10-24).

The Examiner asserts that the previously claimed “*controller for automatically detecting a receiving condition of the broadcasting wave detected by said detector at the time of adjusting an antenna and storing the results of the detection in a memory*” is disclosed in col. 11, lines 36-52 of **Shigihara et al.** This portion of **Shigihara et al.** cited by the Examiner relates to an embodiment wherein an antenna bearing adjustment can be made by first roughly adjusting the antenna while observing an image on a screen of a TV receiver 5, then finely adjusting a peak value while observing the level on an indicator 18 (see, e.g., col. 11, lines 8-15).

The only memory taught in col. 11, lines 36-52 of **Shigihara et al.** is a frame memory of a TV receiver that stores a still image received before a digital broadcast signal is stopped (i.e., not received) while adjusting an antenna (see, e.g., col. 11, lines 58-61). **Shigihara et al.** do not disclose a “receiver having a first mode of operation for storing in [a] memory the receiving conditions of each of [a] *plurality* of broadcasting waves at a time of adjusting an antenna...,” as presently recited in claim 21.

Further, the still image stored in the frame memory in **Shigihara et al.** is not compared with “the receiving condition of a broadcast wave, during viewing of the broadcasting wave, at a time subsequent to the storing of receiving conditions in the first mode,” as presently recited in claim 21. That is, **Shigihara et al.** do not disclose the claimed “a second mode of operation in which *the receiving conditions of a broadcasting wave, during viewing of the broadcasting wave*

*at a time subsequent to the storing of receiving conditions in the first mode, is compared with the receiving condition stored in the memory for the broadcasting wave, ....”*

Moreover, **Shigihara et al.** do not disclose or suggest “...and, if, based on the comparison, it is judged that the receiving condition of the broadcasting wave is degraded, a report is provided to a user by at least one of audio and video,” as presently recited in claim 21. More particularly, the embodiments disclosed by **Shigihara et al.** are related to embodiments wherein an error rate of the broadcast wave is detected by an error detecting/correcting circuit 9 and the error rate is converted into signal quality data by a controlling part 15. The signal quality data is then displayed on an indicator 18 (see col. 8, lines 39-56). The digital signal quality indicator can be used to adjust the antenna bearing (see, e.g., Fig. 14, col. 12, line 62 – col. 13, line 4).

However, **Shigihara et al.** teaches no judging and reporting that a receiving condition is degraded based on a comparison of results of a stored receiving condition of a broadcast wave at a time of adjusting the antenna and a receiving condition of the broadcasting wave subsequent to storing the receiving conditions.

For the reasons set forth above, it is respectfully submitted that claim 21 patentably distinguishes over the cited prior art and defines allowable subject matter.

Application No. 09/930,129  
Art Unit: 2611

Amendment under 37 C.F.R. §1.111  
Attorney Docket No.: 042204

**CONCLUSION**

In view of the foregoing amendments and accompanying remarks, it is submitted that all pending claims are in condition for allowance. A prompt and favorable reconsideration of the rejection and an indication of allowability of all pending claims are earnestly solicited.

If the Examiner believes that there are issues remaining to be resolved in this application, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below to arrange for an interview to expedite and complete prosecution of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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